



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/298,603	04/23/1999	BORIS KLOTS	50277210	2232

29989 7590 09/26/2002

HICKMAN PALERMO TRUONG & BECKER, LLP  
1600 WILLOW STREET  
SAN JOSE, CA 95125

EXAMINER

VU, THONG H

ART UNIT	PAPER NUMBER
----------	--------------

2152

DATE MAILED: 09/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/298,603

Applicant(s)

KLOTS ET AL.

Examiner

Thong H Vu

Art Unit

2152

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 April 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 2152

1. This office action is in response to Application filed 12/11/01. Claims 1-29 are pending. The rejection is cited as stated below.

2. The pre amendment filed 12/08/2000.

3. Claims 1-29 are rejected under 35 U.S.C. § 103 as being obvious over Abdelnur et al [Abdelnur 6,212,640 B1] in view of Smith et al [Smith 5,835,724].

4. As per claims 1,11,16,20 Abdelnur discloses a system and method for processing data on a distributed computing system that includes a plurality of nodes [Abdelnur abstract, Fig 4], the method comprising the steps of

in response to receiving a first work request to perform first work from a first process on a first node from the plurality of nodes, determining based upon the first work that the first work (and mapping data), that the first work is to be performed on a second node from the plurality of nodes which is equivalent to a client application sends a first work request to Web server which determines based on request will be service by the second node or server with appropriate resource [Fig 4], col 8 line 28-col 9 line 2]; and

providing the first work request to a second process on the second node, wherein the first work request specifies that the first process is to receive results of the first work directly from the second process which is equivalent to server with resource sends a response directly to client [Fig 4, col 24-67].

Abdelnur also taught the client using modem to connect to the web server (i.e.: remote procedure call) [col 13 lines 5-19]; processor [Fig 7], the director (i.e.: servlet) [Fig 4]; a plurality of nodes (i.e.: web environment).

However Abdelnur did not teach the work (i.e.: request, task, job) as mapping data that can be performed by each of plurality nodes.

A skilled artisan would have motivation to improve the server performance and found Smith's teaching. Smith taught a client-server environment wherein the server including a session manager mapping file [Smith col 10 lines 26-42]

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the servers or nodes with a mapping data capability as taught by Smith into the Abdelnur's apparatus in order to utilize the validation process on resources nodes. Doing so would provide the efficiency and accuracy for the needs of client request.

Thus the system and method of claims 1,11,16 and 20 is obvious in view of the combinations of references.

5. As per claims 2,21 Abdelnur-Smith disclose including the steps of in response to receiving a second request to perform second work from the first process, determining that the second work is to be performed on a third node from the plurality of nodes, and providing the second request to a third process on the third node, wherein the second request specifies that the first process is to receive results of the second work directly from the third process as inherent feature of web server with servlet [Abdelnur Fig 4].

6. As per claims 3,22 Abdelnur-Smith disclose including the steps of in response to receiving a second request to perform second work from a third process on a third node from the plurality of nodes, determining (based upon the second work and the mapping data), that the second work is to be performed on the second node, and providing the

second request to the second process, wherein the second request specifies that the third process is to receive results of the second work directly from the second process as inherent feature of web server with servlet [Abdelnur Fig 4].

7. As per claims 4,23 Abdelnur-Smith disclose including the steps of in response to receiving a second request to perform second work from a third process on a third node from the plurality of nodes (or servers), determining (based upon the second work and the mapping data), a fourth node from the plurality of nodes on which the second work is to be performed, and providing the second request to a fourth process on the fourth node, wherein the second request specifies that the third process is to receive results of the second work directly from the fourth process as inherent feature of web server with servlet [Abdelnur Fig 4].

8. As per claims 5,24 Abdelnur-Smith disclose including the steps of determining (based upon the first work and the mapping data) that the first work is also to be performed on a third node from the plurality of nodes, and providing a second request to a third process on the third node, wherein the second request specifies that results of the first work performed on the third node are to be provided from the third node directly to the first process as inherent feature of web server with servlet [Abdelnur Fig 4].

9. As per claims 6,25 Abdelnur-Smith disclose the step of determining that the first work is to be performed on a second node includes the step of determining one or more resources required to perform the first work, and determining which of the plurality of nodes is allowed to perform the first work on the one or more resources as inherent feature of web server with servlet [Abdelnur Fig 4].

10. As per claims 7,26 Abdelnur-Smith disclose the step of determining that the first work is to be performed on a second node from the plurality of nodes includes the step of a director determining that the first work is to be performed on a second node from the plurality of nodes, and the step of providing the first work request to a second process on the second node includes the step of the director providing the first work request to a second process on the second node as inherent feature of web server with servlet [Abdelnur Fig 4].

11. As per claims 8,27 Abdelnur-Smith disclose the step of upon completion of the first work, the second process providing the results of the first work directly to the first process [Abdelnur Fig 4, col 10 lines 24-67].

12. As per claims 9,28 Abdelnur-Smith disclose the first work request is a remote procedure call (i.e.: modem) [Abdelnur col 13 lines 5-19].

13. As per claims 10,29 Abdelnur-Smith disclose including the step of generating an updated first work request that specifies that the first process is to receive the first results of performing the first work and wherein the step of providing the first work request to a second process includes the step of providing the updated first work request to the second process [Abdelnur col 13 lines 35-48].

14. As per claim 12, Abdelnur-Smith disclose including the steps of the director determining one or more resources required to perform the first work, and the director determining which of the plurality of nodes have permission to perform a requested operation on the one or more resources required to perform the first work [Abdelnur Fig 4 col 10 lines 24-67].

Art Unit: 2152

15. As per claim 13, Abdelnur-Smith disclose the step of the director determining the resources available on the plurality of nodes includes the director examining resource data associated with the plurality of nodes [Abdelnur Fig 4 col 10 lines 24-67].

16. As per claim 14, Abdelnur-Smith disclose including the steps of the director receiving a second remote procedure call from the first client process, wherein the second remote procedure call requests that second work be performed and that results of the second work be provided directly to the first client process, the director examining the second remote procedure call and determining that a second server process on a second server node from the plurality of nodes is to perform the second work, and the director providing the second remote procedure call to the second server process [Abdelnur col 13 lines 5-19].

17. As per claim 15, Abdelnur-Smith disclose including the steps of the director receiving a second remote procedure call from a second client process on a second client node in the plurality of nodes, wherein the second remote procedure call requests that second work be performed and that results of the second work be provided directly to the second client process, the director examining the second remote procedure call and determining that a second server process on a second server node from the plurality of nodes is to perform the second work, and the director providing the second remote procedure call to the second server process [Abdelnur col 13 lines 5-19].

18. As per claim 17, Abdelnur-Smith disclose the director is further configured to provide the first work request to the second process [Abdelnur Fig 4 col 10 lines 24-67].

Art Unit: 2152

As per claim 19, Abdelnur-Smith disclose the director is further configured to generate a second work request to requests that the second process perform the first work and provide the first results directly to the first process, and provide the second work request to the second process [Abdelnur Fig 4 col 10 lines 24-67].

19. As per claim 19, Abdelnur-Smith disclose resource data that specifies the access rights of the plurality of nodes relative to resources [Abdelnur Fig 5-6, col 9 lines 50-67].

Thus, the system and method of claims 1-29 is obvious in view to the prior art.

20. Claims 1-29 are rejected under 35 U.S.C. § 102[e] as being anticipated by Guenthner et al [Guenthner 6,360,262 B1]

21. As per claims 1, 11, 16,20 Guenthner discloses a system and method for processing data on a distributed computing system that includes a plurality of nodes [abstract], the method comprising the steps of

maintaining mapping data that specifies work that can be performed by each of plurality nodes [col 1 line 55-col 2 line 28, col 4 lines 5-24, col 5 lines 12-32];

in response to receiving a first work request to perform first work from a first process on a first node from the plurality of nodes, determining based upon the first work that the first work and mapping data, that the first work is to be performed on a second node from the plurality of nodes [col 1 line 55-col 2 line 28, col 4 lines 5-24, col 5 lines 12-32]; and

providing the first work request to a second process on the second node, wherein



the first work request specifies that the first process is to receive results of the first work directly from the second process [Fig 4B, col 4 lines 64-col 5 line 12].

22. As per claims 2,21 Guenther discloses including the steps of in response to receiving a second request to perform second work from the first process, determining that the second work is to be performed on a third node from the plurality of nodes, and providing the second request to a third process on the third node, wherein the second request specifies that the first process is to receive results of the second work directly from the third process as inherent feature of client-server process.

23. As per claims 3,22 Guenther discloses including the steps of in response to receiving a second request to perform second work from a third process on a third node from the plurality of nodes, determining that the second work is to be performed on the second node, and providing the second request to the second process, wherein the second request specifies that the third process is to receive results of the second work directly from the second process as inherent feature of client-server process.

24. As per claims 4,23 Guenther discloses including the steps of in response to receiving a second request to perform second work from a third process on a third node from the plurality of nodes, determining a fourth node from the plurality of nodes on which the second work is to be performed, and providing the second request to a fourth process on the fourth node, wherein the second request specifies that the third process is to receive results of the second work directly from the fourth process as inherent feature of client-server process.

25. As per claims 5,24 Guenthner discloses including the steps of determining that the first work is also to be performed on a third node from the plurality of nodes, and providing a second request to a third process on the third node, wherein the second request specifies that results of the first work performed on the third node are to be provided from the third node directly to the first process as inherent feature of client-server process.

26. As per claims 6,25 Guenthner discloses the step of determining that the first work is to be performed on a second node includes the step of determining one or more resources required to perform the first work, and determining which of the plurality of nodes is allowed to perform the first work on the one or more resources as inherent feature of client-server process.

27. As per claims 7,26 Guenthner discloses the step of determining that the first work is to be performed on a second node from the plurality of nodes includes the step of a director determining that the first work is to be performed on a second node from the plurality of nodes, and the step of providing the first work request to a second process on the second node includes the step of the director providing the first work request to a second process on the second node as inherent feature of client-server process.

28. As per claims 8,27 Guenthner discloses the step of upon completion of the first work, the second process providing the results of the first work directly to the first process [Fig 4B col 4 line 64-col 5 line 12].

29. As per claims 9,28 Guenthner discloses the first work request is a remote procedure call as inherent feature of client-server process.

30. As per claims 10,29 Guenthner discloses including the step of generating an updated first work request that specifies that the first process is to receive the first results of performing the first work and wherein the step of providing the first work request to a second process includes the step of providing the updated (i.e.: redirect) first work request to the second process [abstract, Fig 6].

31. As per claim 12, Guenthner discloses including the steps of the director determining one or more resources required to perform the first work, and the director determining which of the plurality of nodes have permission to perform a requested operation on the one or more resources required to perform the first work which is equivalent to the resource router selects the most appropriate server to forward the client request [Fig 3 col 4 lines 64-col 5 line 12].

32. As per claim 13, Guenthner discloses the step of the director determining the resources available on the plurality of nodes includes the director examining resource data associated with the plurality of nodes [Fig 3 col 4 lines 64-col 5 line 12].

33. As per claim 14, Guenthner discloses including the steps of the director receiving a second remote procedure call from the first client process, wherein the second remote procedure call requests that second work be performed and that results of the second work be provided directly to the first client process, the director examining the second remote procedure call and determining that a second server process on a second server node from the plurality of nodes is to perform the second work, and the director providing the second remote procedure call to the second server process as inherent feature of client-server process.

Art Unit: 2152

34. As per claim 15, Guenthner discloses including the steps of the director receiving a second remote procedure call from a second client process on a second client node in the plurality of nodes, wherein the second remote procedure call requests that second work be performed and that results of the second work be provided directly to the second client process, the director examining the second remote procedure call and determining that a second server process on a second server node from the plurality of nodes is to perform the second work, and the director providing the second remote procedure call to the second server process as inherent feature of client-server process.

35. As per claim 17, Guenthner discloses the director is further configured to provide the first work request to the second process [Fig 3 col 4 lines 64-col 5 line 12].

36. As per claim 19, Guenthner discloses the director is further configured to generate a second work request to requests that the second process perform the first work and provide the first results directly to the first process, and provide the second work request to the second process [Fig 3 col 4 lines 64-col 5 line 12].

37. As per claim 19, Guenthner discloses resource data that specifies the access rights of the plurality of nodes relative to resources as inherent feature of client-server process.

Thus, the system and method of claims 1-29 is anticipated by the prior art.

38. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Thong Vu, whose telephone number is (703)-305-4643. The examiner can normally be reached on Monday-Thursday from 8:00AM- 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, *Mark Rinehart*, can be reached at (703) 305-4815.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9700.

Art Unit: 2152

Any response to this action should be mailed to: Commissioner of Patent and Trademarks, Washington, D.C. 20231 or faxed to :

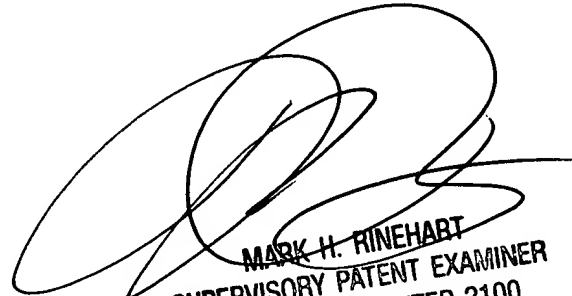
After Final (703) 746-7238

Official: (703) 746-7239

Non-Official (703) 746-7240

Hand-delivered responses should be brought to Crystal Park 11,2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

**Thong Vu**  
**Patent Examiner**  
**Art Unit 2152**



**MARK H. RINEHART**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2100**